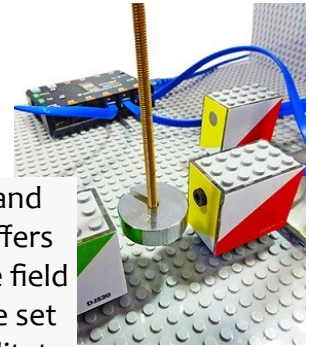


# S3 PCB.P Physics kit



**S3 PCB.P** is an **add-on** set of SMART:Blox to the **S1 Basic kit** offering more Input and Output devices and more programming training in **Physics** oriented projects. It offers the possibility to create more complex STEAM projects, typical of Physics Science field applications and enhance greater skills in algorithmic and programming logic. The set comes also with **S3 LSB** kit of lab components used in Science experiment to facilitate the students in conducting those experiments in a more scientifically fashionable way. This is optional, students can use other simple components (recommended in the syllabus) to conduct those experiments.

Below are the devices used in the S3 PCB.P kit:

| S3 PCB.P - Add-on kit to S1      | Pcs |
|----------------------------------|-----|
| SB 08 IR Receiver                | 1   |
| SB 09 IR Transmitter             | 1   |
| SB 33 Force Sensor               | 1   |
| SB 34 Pressure Sensor            | 1   |
| SB 35 Voltmeter Sensor           | 1   |
| SB 36 Ammeter Sensor             | 1   |
| SB 32 Ultrasonic Distance Sensor | 1   |
| SB 27 Temperature - Probe Sensor | 1   |
| SB 29 Hall Magnetic Sensor       | 1   |
| SB 18 LDR Sensor                 | 1   |
| SB 51 Laser - Triple             | 1   |
| SB 37 Acceleration sensor        | 1   |
| SB 20 Vibration Sensor           | 1   |
| SB 50 RJ 11 Adapter Universal    | 1   |



| S3 LSB - Additional experimental lab devices for S3 PCB.P |
|---|
| 1 Balance bar and S/Q hooks                               |
| 2 Weight set, S and Q hooks: 100gr and 50gr               |
| 3 Water container $\geq$ 100 ml                           |
| 4 Set of springs  |
| 5 SBE1- 3 resistor circuit                                |
| 6 SBE2 - RLC circuit                                      |
| 7 Magnet bar (rectangular)                                |
| 8 Rod stand assembly                                      |
| 9 Syringe $\geq$ 60ml                                     |
| 10 Friction board and incline plane                       |
| 11 Battery holder   |
| 12 Pulleys + string (2pcs)                                |
| 13 Dual speed car   |
| 14 Slot weights (10x10gr & 1x50gr)                        |
| 15 Heat conductivity block                                |
| 16 Friction blocks, wooden (2pcs)                         |
| 17 Compass  |
| 18 Heating plates   |
| 19 Calorimeter  |
| 20 Ruler  |
| 21 Set of optics prisms and lenses                        |
| 22 Electric Power source (Pack)                           |

Below are **indicative Physics experiments** that can be performed using the S3 PCB.P add-on set:

| Project Themes                 | C-STEAM | Level |
|--------------------------------|---------|-------|
| Weight and mass                | C       | 1     |
| Boyant force                   | C       | 1     |
| Balance and moments            | C       | 1     |
| Newton's 3rd law               | C       | 1     |
| Impulse of force               | C       | 1     |
| Hooke's Law                    | C       | 1     |
| Spring system                  | C       | 1     |
| Simple Pendulum                | C       | 1     |
| Thermal transfer               | C       | 1     |
| Relative Humidity              | C       | 1     |
| Heat conductivity of materials | C       | 1     |
| Thermal radiation              | C       | 1     |
| Uniform circular motion        | C       | 1     |

For each device in the ARDicon database there is a specific icon to be used. Each device has a separate icon also for describing its state, for example ON or OFF, High or LOW.

